

# FDA approves Beyfortus™ (nirsevimab-alip) to protect infants against RSV disease



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FDA approves Beyfortus™ (nirsevimab-alip) to protect infants against RSV disease

- Beyfortus™ is the first monoclonal antibody approved to protect all infants through their first RSV season
- Across all clinical endpoints, a single dose of Beyfortus delivered high, consistent and sustained efficacy and favorable safety against RSV disease
- Approval also includes use for children up to 24 months of age who remain vulnerable to severe RSV disease through their second RSV season

Paris, July 17, 2023. The U.S. Food and Drug Administration (FDA) has approved Sanofi and AstraZeneca's Beyfortus™ (nirsevimab-alip) for the prevention of respiratory syncytial virus (RSV) lower respiratory tract disease (LRTD) in newborns and infants born during or entering their first RSV season, and for children up to 24 months of age who remain vulnerable to severe RSV disease through their second RSV season. The companies plan to make Beyfortus available in the U.S. ahead of the upcoming 2023-2024 RSV season.

RSV is the leading cause of hospitalization for infants under the age of one in the U.S., averaging 16 times higher than the annual rate for influenza.<sup>1,2</sup> Each year, an estimated 590,000 RSV disease cases in infants under one require medical care, including physician office, urgent care, emergency room visits and hospitalizations.<sup>3</sup>

Executive Vice President, Vaccines, Sanofi

Today's approval marks an unprecedented moment for protecting infant health in the U.S., following an RSV season

that took a record toll on infants, their families, and the U.S. healthcare system. Beyfortus is the only monoclonal antibody approved for passive immunization to provide safe and effective protection for all infants during their first RSV season. I am proud that, by prioritizing this potential game-changer, we are now about to bring Beyfortus to American families.

Executive Vice President, Vaccines and Immune Therapies,  
AstraZeneca

Beyfortus represents an opportunity for a paradigm-shift in preventing serious respiratory disease due to RSV across a broad infant population in the U.S. The science that Beyfortus is built on demonstrates AstraZeneca's continued leadership in addressing the needs of the most vulnerable populations and reducing the burden on healthcare systems.

The FDA decision follows the positive recommendation of the FDA Antimicrobial Drugs Advisory Committee and was based on the extensive Beyfortus clinical development program spanning three pivotal late-stage clinical trials. Across all clinical endpoints, a single dose of Beyfortus demonstrated high and consistent efficacy against RSV LRTD extending through five months, a typical RSV season.

Beyfortus was well tolerated with a favorable safety profile that was consistent across all clinical trials. The overall rates of adverse events were comparable between Beyfortus and placebo and the majority of adverse events were mild or moderate in severity. The most common adverse events were rash and injection site reactions.

The single administration of Beyfortus was developed to correspond with the beginning of the RSV season for babies born prior to the season or at birth for those born during the RSV season. In clinical trials, Beyfortus helped prevent RSV LRTD requiring medical care in all infant populations studied, including those born healthy at term, late preterm or preterm, or with specific health conditions that make them vulnerable to severe RSV disease. RSV disease

requiring medical care included physician office, urgent care, emergency room visits and hospitalizations.

Beyfortus, jointly developed by Sanofi and AstraZeneca, was approved in the European Union in October 2022, in Great Britain in

November 2022, and recently received approval in Canada in April 2023. Regulatory applications are also currently under review in China, Japan and several other countries.

RSV is a very contagious virus that can lead to serious respiratory illness for infants, according to the Centers for Disease Control and Prevention (CDC). RSV symptoms can include runny nose, coughing, sneezing, fever, decrease in appetite, and wheezing.<sup>4</sup> Two out of three infants are infected with RSV during their first year of life and almost all children are infected by their second birthday.<sup>4,5</sup> In the U.S., RSV is the leading cause of hospitalization in infants under 12 months, averaging 16 times higher than the annual rate for influenza.<sup>1,2</sup> Approximately 75% of infants hospitalized for RSV are born healthy and at term with no underlying conditions.<sup>6</sup> Each year in the U.S., an estimated 590,000 RSV disease cases in infants under one require medical care, including physician office, urgent care, emergency room visits and hospitalizations.<sup>3</sup>

In the U.S., Beyfortus is a single-dose long-acting antibody designed to help prevent RSV lower respiratory tract disease in all infants through their first RSV season. Beyfortus is also indicated for children up to 24 months of age who remain vulnerable to severe RSV disease through their second RSV season.

Beyfortus, provided directly to newborns and infants as a single dose, offers rapid protection via an antibody to help prevent LRTD caused by RSV, without requiring activation of the immune system.<sup>7</sup> Beyfortus administration can be timed to the start of the RSV season.

In March 2017, Sanofi and AstraZeneca announced an agreement to develop and commercialize Beyfortus. Under the terms of the agreement, AstraZeneca leads development and manufacturing activities and Sanofi leads commercialization activities and records revenues. Under the terms of the global agreement, Sanofi made an upfront payment of

€120m, has paid development and regulatory milestones of €55m and will pay up to a further

€440m upon achievement of certain regulatory and sales-related milestones. The two companies share costs and profits in all territories except in the U.S. where Sanofi consolidates 100% of the economic benefits in its Business Operating Income.

Beyfortus has been granted special designations to facilitate expedited development by several regulatory agencies around the world. These include Breakthrough Therapy Designation and Priority Review designation by The China Center for Drug Evaluation under the National Medical Products Administration; Breakthrough Therapy Designation from the U.S. Food and Drug Administration; access granted to the European Medicines Agency

(EMA) PRImity MEdicines (PRIME) scheme and EMA accelerated assessment; Promising Innovative Medicine designation by the UK Medicines and Healthcare products Regulatory Agency; and has been named

a medicine for prioritized development

under the Project for Drug Selection to Promote New Drug Development in Pediatrics by the Japan Agency for Medical Research and Development.

Beyfortus has been granted marketing authorization in the European Union, Great Britain and Canada for the prevention of RSV lower respiratory tract disease in newborns and infants from birth through their first RSV season and is currently undergoing regulatory review in China, Japan and several other countries. In Canada, nirsevimab is also approved for children up to 24 months of age who remain vulnerable to severe RSV disease through their second RSV season and such indication is under review at the EMA level.

The Phase 2b trial (Trial 03) was a randomized, placebo-controlled trial designed to measure the efficacy of Beyfortus against medically attended lower respiratory tract disease (LRTD) caused by RSV through 150 days post-dose in healthy preterm infants of 29 to less than 35 weeks' gestation (n=1,453). Infants were randomized (2:1) to receive a single 50 mg intramuscular injection of Beyfortus (n=969) or placebo (n=484) regardless of weight at the RSV season start. The primary endpoint was met, significantly reducing the incidence of medically attended RSV LRTD by 70.1% (95% CI: 52.3, 81.2; P<0.001) compared to placebo. In a prespecified secondary endpoint, Beyfortus reduced medically attended RSV LRTD with hospitalization by 78.4% (95% CI 51.9, 90.3) versus placebo.

The Beyfortus dosing regimen was determined based on further exploration of the Phase 2b data and was used in subsequent trials as

a single 50 mg dose for those who weigh less than 5 kg, or a single 100 mg dose for those who weigh 5 kg or greater. A post-hoc analysis of the Phase 2b study that applied the recommended 50 mg dose in a subgroup of infants weighing less than 5 kg showed the efficacy of Beyfortus against medically attended RSV LRTD and medically attended RSV LRTD with hospitalization was 86.2% (95% CI 68.0, 94.0) and 86.5% (95% CI 53.5, 96.1), respectively.

The Phase 3 MELODY trial (Trial 04) was a randomized, double-blind, placebo-controlled trial conducted across 21 countries designed to determine the safety and efficacy of Beyfortus against medically attended LRTD caused by RSV in healthy term and late preterm infants (35 weeks gestational age or greater) entering their first RSV season, including efficacy against severe disease such as hospitalization, through 150 days after dosing. The primary endpoint was met, reducing the incidence of medically attended RSV LRTD by 74.9% (95% CI 50.6, 87.3;  $P<0.001$ ) compared to placebo. The efficacy of Beyfortus against the secondary endpoint of hospitalization was 60.2% (95% CI: -14.6, 86.2).

MEDLEY (Trial 05) was a Phase 2/3, randomized, double-blind, palivizumab-controlled trial with the primary objective of assessing safety and tolerability for Beyfortus in preterm infants of less than 35 weeks' gestational age and infants with congenital heart disease (CHD) and/or chronic lung disease (CLD) of prematurity eligible to receive palivizumab. Between July 2019 and May 2021, a total of 925 infants at higher risk for severe RSV disease entering their first RSV season were randomized to receive Beyfortus or palivizumab. Safety was assessed by monitoring the occurrence of treatment emergent adverse events (TEAEs) and treatment emergent severe adverse events (TESAEs) through 360 days post-dose. Serum levels of Beyfortus following dosing (on day 151) in this trial were comparable with those observed in the Phase 3 MELODY trial (Trial 04), indicating similar protection in this population to that in healthy term and late preterm infants is likely.

The safety profile of Beyfortus was similar to palivizumab in the MEDLEY Phase 2/3 trial and consistent with the safety profile in healthy term, late preterm and preterm infants compared to placebo across the MELODY and Phase 2b trials. While uncommon, the most

reported adverse reactions were rash 14 days post-dose, (the majority of which were mild to moderate) and non-serious injection site reactions within 7 days post-dose.

The results of MELODY, Phase 2/3 MEDLEY and the Phase 2b trials illustrate that Beyfortus helps protect infants during their first RSV season against RSV disease with a single dose. This all-infant population includes healthy term, late preterm, and preterm infants, as well as infants with specific health conditions that make them vulnerable to severe RSV disease.

These trials form the basis of regulatory submissions that began in 2022.

We are an innovative global healthcare company, driven by one purpose: we chase the miracles of science to improve people's lives. Our team, across some 100 countries, is dedicated to transforming the practice of medicine by working to turn the impossible into the possible. We provide potentially life-changing treatment options and life-saving vaccine protection to millions of people globally, while putting sustainability and social responsibility at the center of our ambitions.

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financial condition of any one of them, as well as on our employees and on the global economy as a whole. The risks and uncertainties also include the uncertainties discussed or identified in the public filings with the SEC and the AMF made by Sanofi, including those listed under “Risk Factors” and

### **Cautionary Statement Regarding Forward-Looking Statements**

in Sanofi's annual report on Form 20-F for the year ended December 31, 2022. Other than as required by applicable law, Sanofi does not undertake any obligation to update or revise any forward-looking information or statements.

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